

# OceanXpert-Lab IR-CH4

Precise, mobile flow-through CH<sub>4</sub> Analyzer

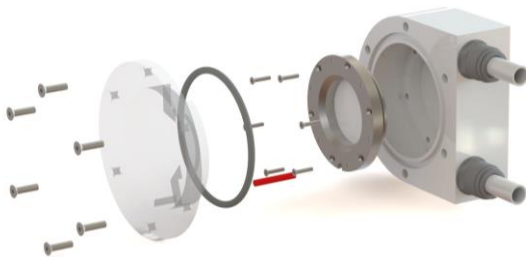


- ▶ **Cost-effective and precise NDIR dual-wavelength sensor**
- ▶ **Auto calibration**
- ▶ **Low maintenance – low follow-up costs**
- ▶ **Simple touch-screen operation**
- ▶ **Robust against sediments, fouling, shock & vibration**
- ▶ **Expandable with additional oceanographic or meteo sensors**
- ▶ **Optional Top-Box for atmospheric-CO<sub>2</sub> and GPS georeferencing**
- ▶ **Operates standalone or integrated in OceanPack™ underway system**

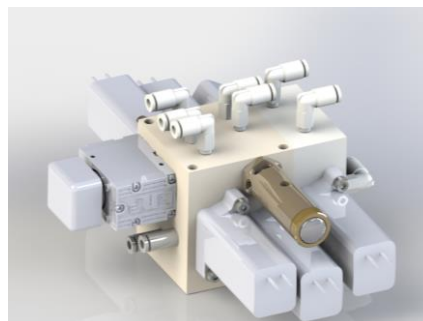


## Features & Benefits:

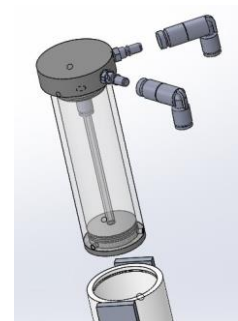
- Dual-wavelength NDIR detector
- Robust, versatile and compact 19" housing for Lab and Vessel applications
- Easy to operate and maintain with intuitive design. Just Plug & Play
- High stability with automatic or manual span gas calibration – low maintenance costs
- High quality data with only one external span gas: reduce size, weight and effort for operation and maintenance
- Patented robust flat-membrane-equilibrator cassette – lifetime 10+ years
- 7" touch-screen allows real-time data view, calibration support and easy configuration
- Real-time data interface NMEA-0183: simple ASCII protocol, configurable to your needs
- Data recording on internal SD card, standard ASCII NMEA-0183 data format (can be processed with any standard software); download data via USB port
- Internal data logger allows easy integration of additional sensors: CTD/TSG, Oxygen, Fluorometer, Turbidity, Nutrient Analysers, pH, etc.
- Analog output or serial interface (optically isolated) for simple integration into existing systems
- 12...32V DC or 100...240V AC power supply
- Expandable through external modules via RS-485 MODBUS, e.g. for meteorological sensors
- Optional GPS georeferencing for all data and position event control
- Optional online telemetry data transfer and alarm services



Flat-silicone-membrane equilibrator with cassette system (patent pending).



Highly optimized auto-calibration unit with special developed micro gas valves pump.



Internal Zero-filter, simple exchange with quick-lock fittings



Specifications	
<b>Sensor Principle</b>	High performance NDIR dual-wavelength optical sensor • Silicone flat membrane equilibrator
<b>Range</b>	0..1%, 0..5%, 0..10%, 0..30%, 0..100%
<b>Resolution</b>	0.1 ppm CH <sub>4</sub>
<b>Accuracy</b>	Auto-correction for pressure and temperature effects • ±2% Full-scale
<b>Sample Rate</b>	Output rate typ. 1 Hz with optional averaging • User configurable • Storage rate configurable
<b>Air CH<sub>4</sub></b>	Optional • Automatic analysis on programmed intervals
<b>Calibration</b>	Internally stored coefficients • User correction supported for Zero & Span
<b>Temperature</b>	Operating temperature range 0 to +40°C • Optional heater for -20 to +40°C
<b>Analogue Output</b>	Optional • 0...5V or 0...20mA / 4...20mA • Range can be adjusted
<b>Data Interface</b>	RS-232 (RS-485 optional) • simple ASCII NMEA-0183 • Easy integration into existing systems
<b>Data Storage</b>	Internal 8GB SD card • Storage capacity approx. 5 years (depending on sample rate)
<b>External Sensors</b>	GPS • CTD • Meteorological instrumentation • Oceanographic sensors
<b>Analogue Input</b>	Optional 16 Bit data acquisition 0/4-20 mA, ±10V etc.
<b>Housing</b>	19" industrial rack housing • Splash protected • Size 445 x 135 x 400 mm W x H x D • Weight 10 kg
<b>Power</b>	12...32 VDC or 100...240 VAC, 50/60Hz • Typ. 20W operating • Max. 50W warming up
<b>Water Supply</b>	Flow rate typ. 3-15 l/min • Max. water pressure 3 Bar
<b>Accessories</b>	External datalogger • External sensors or analyzers • Intake for air CH <sub>4</sub> • Debubbler • Self-cleaning unit
<b>Service</b>	Recalibration & Service recommended every 12 months • Membrane lifetime up to 10 years • Operating time for 24/7 usage typ. 1 year before service





## Accessories



Optional Extender to connect up to 6 external gases. Each input consists of SWAGELOK connector, manual flow regulator and stainless steel tube to the analyser.

## Examples



OceanPack™ RACK underway system with CH<sub>4</sub> analyzer and additional sensors, debubbler and automatic cleaning on a moving drawer



Additional "Top-Box" with independent air CH<sub>4</sub> analyzer, GPS and interfaces to meteo sensors. Simple data interface to the OceanPack™ system.



OceanPack CUBE® (left) for small vessels and mobile applications; additional air-intake box

